

### **REMARKS/ARGUMENTS**

Claims 3 and 18 to 20 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 18 has been amended to overcome the rejection of insufficient antecedent basis.

Claims 1 to 22 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,878,095 to Shigyo.

Reconsideration of the application is respectfully requested.

#### **35 U.S.C. 112 Rejections**

Claims 3 and 18 to 20 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

With respect to claims 3 and 20, it is respectfully submitted that the interpretation in the office action that “a transmission gear” is the same as “a maximum free-wheeling gear” is incorrect. Paragraph [0026] of the present application states that [t]he maximum free-wheeling gear is a predetermined highest gear in which the drive train may be switched to the free-wheeling function.” In contrast, a transmission gear is the gear in the transmission that is currently engaged to the transmission input shaft and may be changed in response to driving conditions and vehicle speed. Support for the transmission gear and that it is not necessarily the same as the maximum free-wheeling gear may be found throughout the specification and in particular in paragraphs [0007], [0009], [0026], [0027] and [0033].

Claim 18 has been amended to overcome the rejection of insufficient antecedent basis.

Withdrawal of the rejections to claims 3 and 18 to 20 under 35 U.S.C. 112, second paragraph, as being indefinite is respectfully requested.

#### **35 U.S.C. 102(e) Rejections**

Claims 1 to 22 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,878,095 to Shigyo.

In Shigyo, a clutch capacity C becomes zero to completely disengage an automatic clutch when deceleration  $\alpha$  becomes the preset deceleration  $\alpha_2$ . When a gas pedal is then operated,

controller 31 sets the command clutch transmission torque at a transmission torque capacity of a clutch full engagement state so that engagement force of automatic clutch 4 is controlled to bring the transmission torque closer to the command clutch transmission torque set at the full engagement value. See col. 5, lines 8 to 12 and 25 to 31, and Fig. 3.

Claim 1 recites a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising:

controlling the clutch so as to change from an engine braking mode to a free wheeling mode; and

reengaging the clutch when a gas pedal is operated in the free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed.

Shigyo does not disclose “reengaging the clutch when a gas pedal is operated in the free-wheeling mode only when an engine rotational speed is above a transmission input rotational speed” as claimed.

When Shigyo S3 is negative, it is not inherent that the engine rotational speed is above the transmission input rotational speed. For example, when coasting downhill, this condition may not be met. Also, even when coasting, there is no determination in Shigyo of how hard the gas pedal is actuated or if the engine rotational speed is above the transmission input rotational speed. Shigyo clearly could reengage when the engine rotational speed is less than the transmission input rotational speed.

Claim 18 has a similar limitation.

Withdrawal of the rejection to claims 1 and 18 and their dependent claims is respectfully requested.

Claim 20, corresponding to original claim 3, recites a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising: controlling the clutch so as to change from an engine braking mode to a free-wheeling mode, wherein the clutch is disengaged to implement the free-wheeling mode when a transmission gear is equal to or less than a maximum free-wheeling gear.

Shigyo does not disclose a maximum free-wheeling gear at all and does not disclose the clutch being disengaged to implement the free-wheeling mode when a transmission gear is equal

to or less than a maximum free-wheeling gear at all. Shigyo's disengagement is based solely on deceleration and vehicle speed.

Claim 21, corresponding to original claim 7, recites a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising: controlling the clutch so as to change from an engine braking mode to a free-wheeling mode, wherein the clutch is disengaged to implement the free-wheeling mode when a driving speed is less than a maximum free-wheeling speed.

Shigyo does not disclose a maximum free-wheeling speed and does not disclose the clutch being disengaged to implement a free-wheeling mode when a driving speed is less than a maximum free-wheeling speed. In fact, Shigyo states "even if the vehicle travels at high speed, this engagement-force decreasing control is firmly executed under a condition that vehicle deceleration  $\alpha$  is greater than or equal to preset deceleration  $\alpha_1$  under a non-shifting state." See col. 6, lines 33-37.

Claim 22, corresponding to original claim 8, recites a method for controlling a clutch located between a drive motor and an automated manual transmission of a drive train, the method comprising: controlling the clutch so as to change from an engine braking mode to a free-wheeling mode, wherein the clutch is disengaged to implement the free-wheeling mode when no downhill driving is detected

Shigyo does not disclose any driving conditions with respect to downhill driving and does not disclose the clutch being disengaged to implement the free-wheeling mode when no downhill driving is detected.

In view of the above, withdrawal of the rejection to claims 1 to 22 under 35 U.S.C. § 102 (e) as being anticipated by Shigyo is respectfully requested.


**CONCLUSION**

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,

DAVIDSON, DAVIDSON & KAPPEL, LLC

By   
William C. Gehris, Reg. No. 38,156

DAVIDSON, DAVIDSON & KAPPEL, LLC  
485 Seventh Avenue, 14<sup>th</sup> Floor  
New York, New York 10018  
Tel: (212) 736-1940  
Fax: (212) 736-2427